

To: Ehren Seybert  
Energy Division  
California Public Utilities Commission

November 15, 2012

Re: Net Energy Metering Cost-Benefit Study – SDG&E Reply Comments

SDG&E appreciates the opportunity to provide these reply comments on the Scope and Methodology of Net Energy Metering (“NEM”) Cost-Benefit Study (“Study”). SDG&E believes it is important that the Scope of Work be maintained in investigating NEM, not distributed generation (“DG”) in general. Current residential rate structures and future changes in avoided costs interacting with NEM lead to an unsustainable long-term situation in California that must be addressed by the Commission and/or the California Legislature.

The Study should clearly indicate that it is uniquely applicable to NEM for California investor-owned utilities where 1) the current residential rate structure has a legislated highly inverted block rate structure and 2) State policies are significantly increasing level of variable renewable generation. The Study findings do not apply to NEM for publicly-owned utilities in California or utilities other states that have significantly different residential rate schedules. Phase 1 of the NEM Cost Benefit study should be focused on providing useful data for Phase 2 to allow for a full exploration of all alternative options to NEM, rate or otherwise, that are sustainable with the long-term, widespread installation of DG that is the goal of current State policies.

SDG&E supports the positions of Division of Ratepayer Advocates (“DRA”) and Pacific Gas and Electric Company (“PG&E”) on the allocation of costs under the current rate structure. The cost allocation should recognize the restrictions of SB 695 and not simply assume rate increases in the residential sector apply equally to all tiers. In addition, analysis of the NEM cap should assume a similar distribution of residential customers taking NEM as exists in 2011 and that a disproportionate share of new NEM residential customers will be comprised of

customers with prior usage in tiers 3-5, as a result of the ‘feedback’ effect described in the DRA comments.<sup>1</sup>

SDG&E also supports the other utilities and ratepayer advocates in asking that the Study account for expected future changes in the electricity market caused by the significant increase in variable renewable generation, both centralized (the renewables currently in the IOUs’ portfolios) and distributed. The load net of must- take renewables on either side of the meter is what capacity will be required to serve. If the large change in expected peak net of variable renewable energy is ignored, the avoided capacity and energy costs at various times of the day will be incorrectly calculated. All the CAISO and E3 studies indicate the peak load net of variable renewables will shift to evening hours by 2020, and possibly as early as 2016. As that shift in peak takes place, the capacity value of solar PV diminishes, since it does not produce after the sun sets and the capacity value for wind increases, as pointed out by the Distributed Wind Energy Association. The Study cannot ignore this future reality caused by California’s aggressive pursuit of renewable energy.

### **Specific Replies**

SDG&E disagrees with both the Interstate Renewable Energy Council (“IREC”) and the Joint Parties (Solar Industries Association, Vote Solar Initiative, Sierra Club California, and the California Solar Energy Industries Association) that AB 2514 calls for the Total Resource Cost (“TRC”) test. AB 2514 indicates the Study shall quantify the benefit and costs of net energy metering to participants and nonparticipants. The Study will quantify the benefits and costs to participants, their bill savings/increases. There are no other costs to participation in the NEM program and no other monetary benefits. The Participant Test and TRC test are not appropriate for a program with no costs, like NEM, and the scope of the Study should not be expanded to investigate the cost effectiveness of DG in general, where a TRC test would be appropriate.<sup>2</sup>

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<sup>1</sup> DRA Comments regarding NEM Cost-Benefit Study Phase 1 methodology, Section 1, page 2.

<sup>2</sup> Where eligibility requires an incremental cost for the customer, the participant test would include incremental costs. For example if the rate paid a premium for power quality provided by a smart inverter, then the participant

The changes to the proposed cost/benefit analysis proposed by SDG&E in opening comments to comply with AB 2514 will provide important information for Phase 2 of the project. NEM, as structured today, provides incentives to maximize distributed generation output irrespective of the impact on the grid. The customer generator relies on the utility to provide power quality services to rectify problems created by intermittent renewables. NEM customers could provide power quality services with changes to existing inverters or smart inverter. As contemplated in AB 2514, the right way to analyze the costs and benefits of the set of NEM transactions between the customer generator and the utility is to identify each transaction involved, and then determine the cost (in the case of utility services) and the avoided cost (in the case of services provided to the grid by the customer) of each. Each transaction can be evaluated and priced appropriately for customers that receive NEM service in Phase 2 of this study.

If the Study will include non-monetary benefits to participants from installing renewable distributed generation, then the value of 100 percent renewable energy could be factored in as an added non-monetary customer benefit. The NEM customer owns the renewable energy produced and the associated psychic value by maintaining ownership of the renewable energy credits ("RECs"). Just like some customers pay a premium to participate in "green tariffs," renewable distributed generation owners gain the non-monetary value of 100 percent renewable energy produced by their systems.<sup>3</sup> Contrary to IREC and Joint Party contentions, the RECs belong to the participants, not other ratepayers. The value of the 100 percent renewable energy should not be included in the NEM cost benefit analysis as a benefit to non-participating ratepayers.

The 100 percent renewable case proposed by IREC and the Joint Parties confuses avoided costs with the study of alternatives proposed for Phase 2. If there is a policy goal to achieve the same level of distributed renewables, it should be investigated in the context of Phase 2 of the study. What are non-participants' costs of achieving that same level of

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test would appropriately consider the cost of the smart inverter and loss of production of kWh versus the benefits to the customer in a higher rate.

<sup>3</sup> It is recognized that some third parties own the RECs and not the end use customer.

distributed renewables through other means? As an example, if the cost for distributed solar resources through a feed-in tariff or solicitation is \$0.13/kWh, but a NEM customer participant avoids a retail rate of \$0.23/kWh, non-participants are worse off by \$0.10/kWh (\$0.23 – \$0.13). Phase 1 should develop the information to make comparisons in Phase 2 related to policy objectives, but should not confuse avoided costs with alternatives to achieve the same level of distributed renewables.

SDG&E disagrees with the avoided T&D costs presented by the Joint Parties. SDG&E filed detailed calculations of its deferred distribution costs in comments on October 1, 2012 in the Demand-side Management OIR (EE/DR/DG0 cost effectiveness proceeding, R.09-11-014). As explained in its calculation of deferred distribution costs, there is a difference between deferral costs and marginal costs. Marginal costs include replacement of old equipment, costs of wires, poles, meters etc. to connect new customers, and costs for distribution upgrades to accommodate more variable renewable DG; all costs cannot be deferred by distributed generation. If the Study updates deferred distribution costs, it should rely on an appropriate definition and not the grossly incorrect data presented by the Joint Parties. If the study wants to develop transmission deferred costs, a similar analysis should determine which costs can actually be deferred. The marginal costs of SCE's transmission system cited by the Joint Parties likely contains many costs that are not deferrable by distributed generation such as transmission costs associated with the delivery of renewable energy. In addition, SDG&E deferred transmission costs are likely different than SCE. Thus, Table 1 of the Joint Parties' comments should be rejected. Again, the more important issue that SDG&E highlighted in its opening comments: taking into account the current peak loads on residential and mixed circuits and the peak load net of distributed renewables on circuits in the future, should be considered as a critical component of an accurate benefits assessment.

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